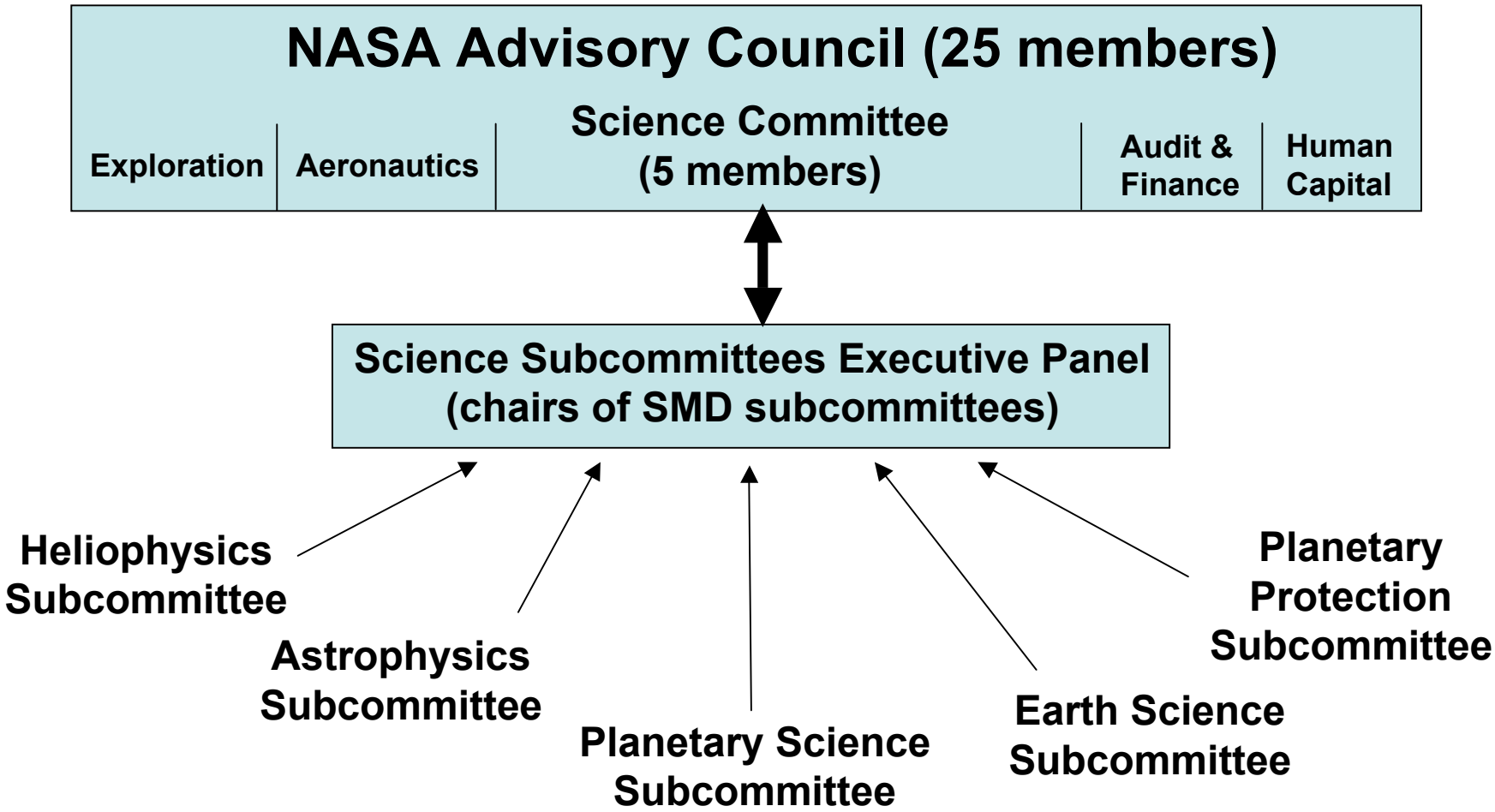
NASA Advisory Council Apparatus



Each Subcommittee has about 15-18 members

Heliophysics Subcommittee of the NASA Advisory Council

Subcommittee Nominees:

Chair: Dr. Alan Title, Lockheed Martin

Dr. James H. Clemmons, The Aerospace Corporation

Dr. Ed Deluca, Harvard-Smithsonian Center for Astrophysics

Dr. Sarah Gibson, NCAR/High Altitude Observatory

Dr. J. Todd Hoeksema, Stanford University

Dr. Janet Kozyra, University of Michigan

Dr. Robert Lin, University of California, Berkeley

Dr. David McKay, NASA Johnson Space Center

Dr. James Russell, Hampton University

Dr. Nathan Schwadron, Boston University

Dr. Steven T. Suess, NASA/MSFC

Dr. Roy Torbert, Univ of New Hampshire

Dr. Raymond Walker, Univ. of California, Los Angeles

Dr. Daniel Winterhalter, NASA/JPL

Joint Meeting of the NAC Science Subcommittees

DATE: May 3-4, 2006

TIMES: 8:30 to 5:30 the first day, and 8:30 to 2:30 the second day

LOCATION: University of Maryland Conference Center, 3501 University Boulevard East, Adelphi, MD 20783

NASA Science Subcommittees Planning Conference

University of Maryland, Inn and Conference Center

Provisional Agenda

May 3

8:00 -- 8:30	Welcome and Advisory Committee Structure	H. Schmitt
8:30 -- 8:45	Agenda and Meeting Plan	M. Allen
8:45 -- 9:45	Ethics and FACA Briefings	A. Greenstone, K. Spear, D. Rausch
9:45 -- 10:00	BREAK	
10:00 -- 11:00	Conversation with the Administrator	M. Griffin
11:00 -- 12:00	SMD Status and FY06/07 Budget Overview	M. Cleave
12:00 -- 1:00	WORKING LUNCH	
1:00 -- 1:30	Science AOs and Grants	P. Hertz
1:30 -- 1:45	Plan for the Afternoon Breakout Sessions	M. Allen
1:45 -- 4:45	***Breakout: Discussion on R&A and Program Mix***	***Div Dirs***
4:45 -- 5:00	BREAK	
5:00 -- 6:00	Subcommittee Reports and Plenary Discussion	
	SUBCOMMITTEES WORKING DINNER	

May 4

8:00 -- 8:30	Public Comment	
8:30 -- 9:00	Science Plan Overview and Plan for Breakout Sessions	G. Williams
9:00 -- 12:00	***Breakout: Roadmaps and Community Input to NASA Science Plan***	***Div Dirs***
12:00 -- 1:00	WORKING LUNCH	
1:00 -- 2:30	Subcommittee Reports, Discussion, and Next Steps	
2:30	ADJOURN	

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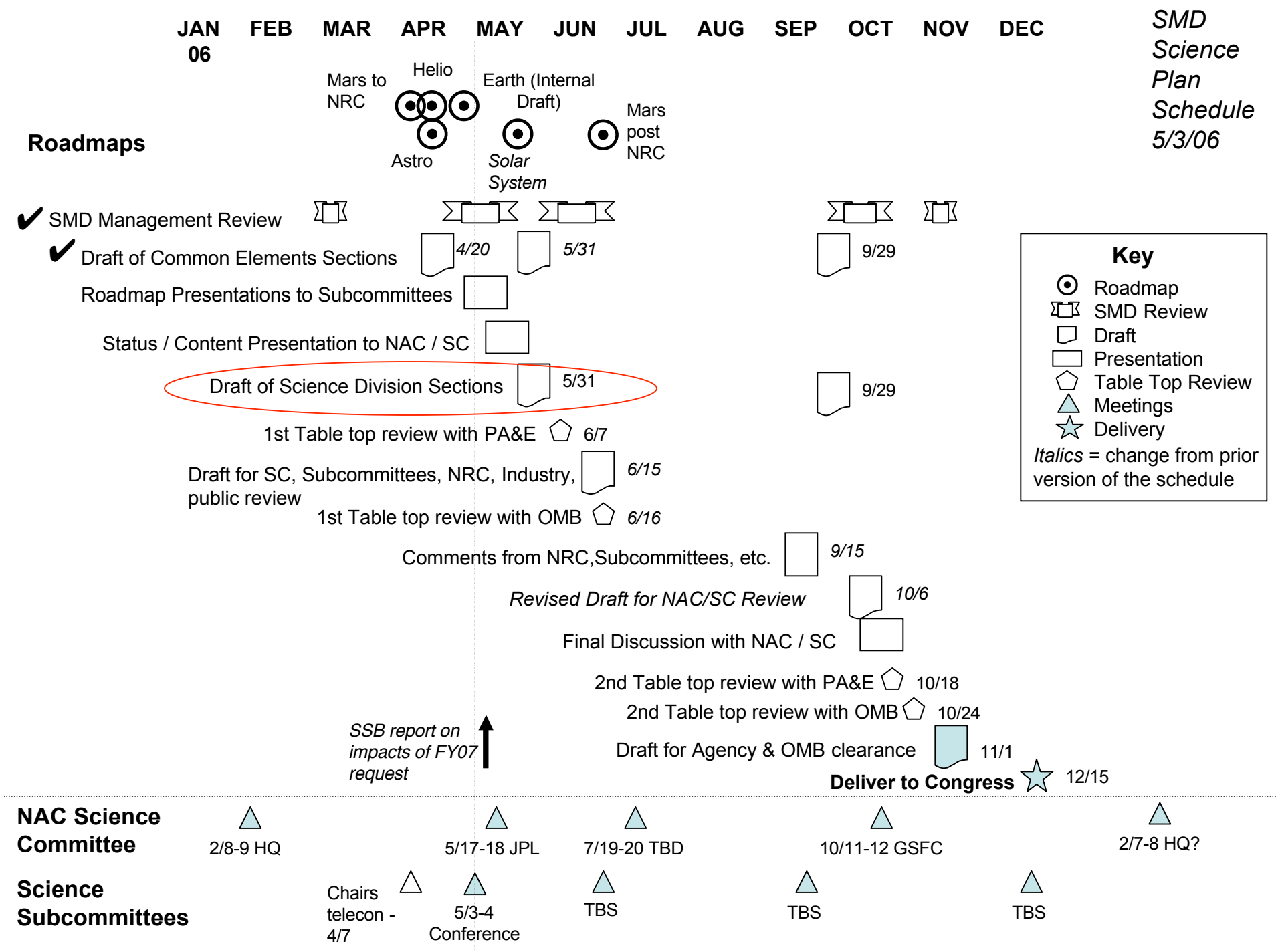
Current Roadmap to Science Plan Process

Roadmap Committees

SECAS/ES3/MOWGS
NRC Reviews

HQ folk/HPS
NRC, OMB Reviews


JAN 06
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
SMD Science Plan Schedule 5/3/06
Roadmaps
Mars to NRC
Helio
Astro
Earth (Internal Draft)
Solar System
Mars post NRC
SMD Management Review
Draft of Common Elements Sections
4/20
5/31
9/29
Roadmap Presentations to Subcommittees
Status / Content Presentation to NAC / SC
Draft of Science Division Sections
5/31
9/29
1st Table top review with PA&E
6/7
Draft for SC, Subcommittees, NRC, Industry, public review
6/15
1st Table top review with OMB
6/16
Comments from NRC,Subcommittees, etc.
9/15
Revised Draft for NAC/SC Review
10/6
Final Discussion with NAC / SC
2nd Table top review with PA&E
10/18
2nd Table top review with OMB
10/24
Draft for Agency & OMB clearance
11/1
Deliver to Congress
12/15
SSB report on impacts of FY07 request
Key
Roadmap
SMD Review
Draft
Presentation
Table Top Review
Meetings
Delivery
Italics = change from prior version of the schedule
NAC Science Committee
2/8-9 HQ
5/17-18 JPL
7/19-20 TBD
10/11-12 GSFC
2/7-8 HQ?
Science Subcommittees
Chairs telecon - 4/7
5/3-4 Conference
TBS
TBS
TBS

Living with a Star Storm Probes

NASA ANNOUNCEMENT OF OPPORTUNITY NNH05ZDA003O:

RADIATION BELT STORM PROBES INVESTIGATIONS AND GEOSPACE-RELATED MISSIONS OF OPPORTUNITY

OPENED: August 23, 2005

- The Announcement of Opportunity closed November 22, 2005.
- There was great interest in this opportunity; proposals were received for all categories of instrumentation and for several areas of Mission of Opportunities.
- We expect to be able to announce selections in June of 2006.

Purpose of the LWS Geospace Missions

LWS was established to address compelling questions of scientific importance that directly affect life and society. To meet this goal, the LWS Geospace missions were conceived to answer these long-standing questions:

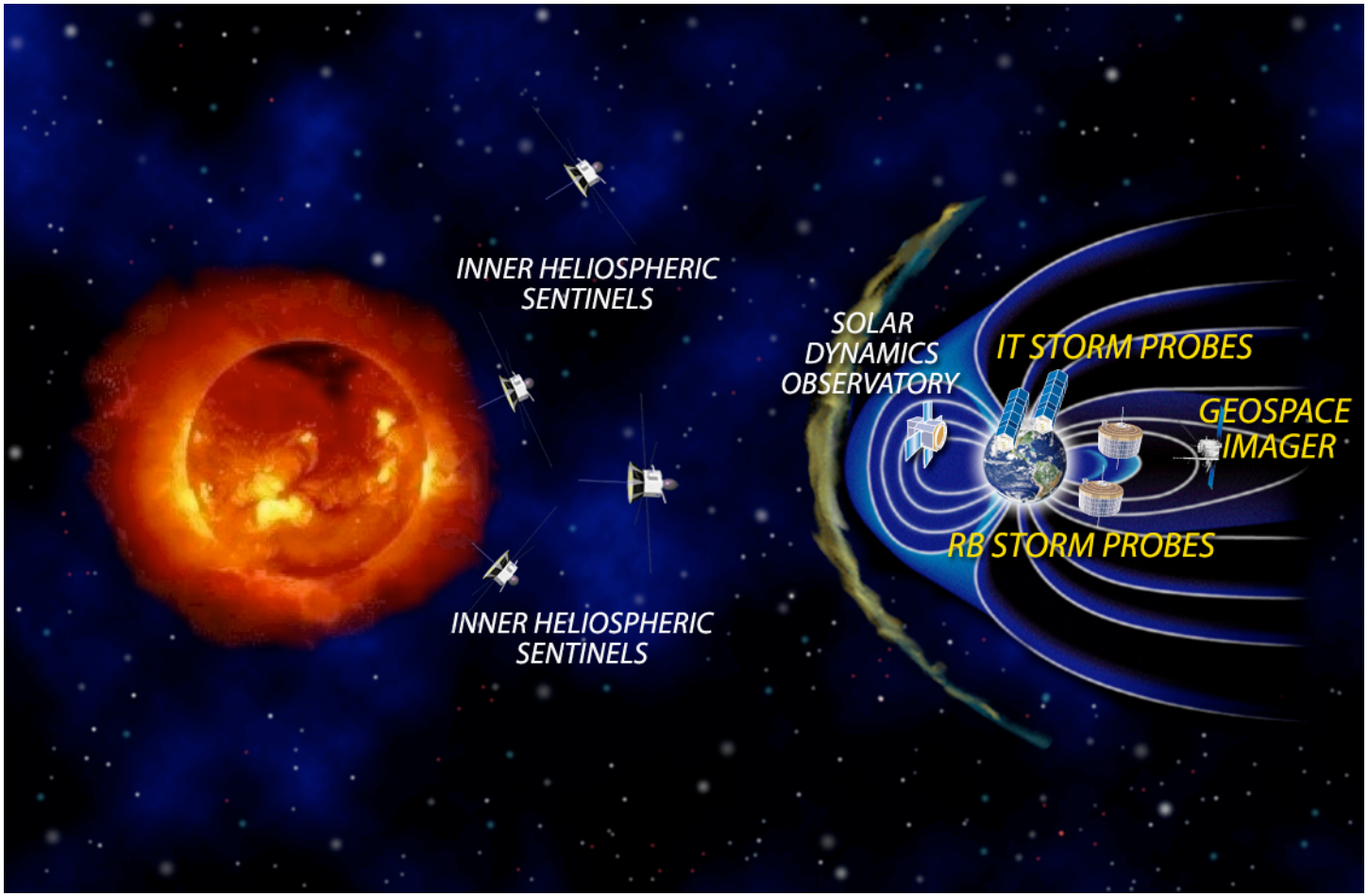
Radiation Belt Storm Probes

1. How, in response to the variable inputs of energy from the sun, are particles in space are accelerated to hazardous radiation energies producing satellite anomalies and affecting the safety of astronauts and of flight crews in high-altitude aircraft.

Ionosphere-Thermosphere Storm Probes

2. How, and under what conditions, do solar-induced storms within planetary ionospheres produce the strong currents, waves and plasma irregularities that adversely affect communication, navigation, and radar systems; increase satellite drag; and induce current anomalies in ground systems.

The Radiation Belt Storm Probes: Role within the Living With a Star Program



Radiation Belt Storm Probes – twin spacecraft in highly elliptical orbits to understand the basic principals behind relativistic particle acceleration, transport, and loss.

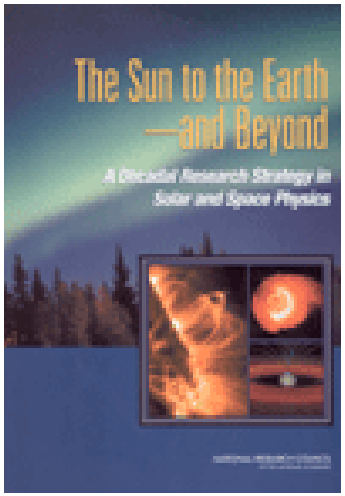
RBSP is being implemented as the 2nd mission in the Living with a Star Program.

Radiation Belt Storm Probes – twin spacecraft in highly elliptical orbits to understand the basic principals behind relativistic particle acceleration, transport, and loss.

RBSP is being implemented as the 2nd mission in the Living with a Star Program.

TABLE ES.1 Priority Order of the Recommended Programs in Solar and Space Physics

Type of Program	Rank	Program	Description
Large	1	Solar Probe	Spacecraft to study the heating and acceleration of the solar wind through in situ measurements and some remote-sensing observations during one or more passes through the innermost region of the heliosphere (from ~0.3 AU to as close as 3 solar radii above the Sun's surface).
Moderate	1	Magnetospheric Multiscale	Four-spacecraft cluster to investigate magnetic reconnection, particle acceleration, and turbulence in magnetospheric boundary regions.
	2	Geospace Network	Two radiation-belt-mapping spacecraft and two ionospheric mapping spacecraft to determine the global response of geospace to solar storms.
	3	Jupiter Polar Mission	Polar-orbiting spacecraft to image the aurora, determine the electrodynamic properties of the Io flux tube, and identify magnetosphere-ionosphere coupling processes.
	4	Multispacecraft Heliospheric Mission	Four or more spacecraft with large separations in the ecliptic plane to determine the spatial structure and temporal evolution of coronal mass ejections (CMEs) and other solar-wind disturbances in the inner heliosphere.
	5	Geospace Electrodynamic Connections	Three to four spacecraft with propulsion for low-altitude excursions to investigate the coupling among the magnetosphere, the ionosphere, and the upper atmosphere.
	6	Suborbital Program	Sounding rockets, balloons, and aircraft to perform targeted studies of solar and space physics phenomena with advanced instrumentation.
	7	Magnetospheric Constellation	Fifty to a hundred nanosatellites to create dynamic images of magnetic fields and charged particles in the near magnetic tail of Earth.
	8	Solar Wind Sentinels	Three spacecraft with solar sails positioned at 0.98 AU to provide earlier warning than L1 monitors and to measure the spatial and temporal structure of CMEs, shocks, and solar-wind streams.
	9	Stereo Magnetospheric Imager	Two spacecraft providing stereo imaging of the plasmasphere, ring current, and radiation belts, along with multispectral imaging of the aurora.
Small	1	Frequency-Agile Solar Radiotelescope	Wide-frequency-range (0.3-30 GHz) radiotelescope for imaging of solar features from a few hundred kilometers above the visible surface to high in the corona.



The LWS Geospace missions, including the RB Storm Probes, was ranked as second priority for Moderate-size missions in the National Academy Decadal Survey for Solar and Space Physics